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PORCELLIO ESERENSIS SP. N. OF TERRESTRIAL ISOPOD FROM THE CANARY ISLANDS (ISOPODA: ONISCIDEA: PORCELLIONIDAE)

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With 11 figures

ABSTRACT: A new endemic species of terrestrial isopods from El Hierro (western Canary islands) is described. We have found the relationships of *Porcellio eserensis* among species belonging to the *scaber* group in the Madeira Archipelago. The small size, the shape of the frontal lobes, telson and the shape of the exopod of the first pleopod of the male relate *Porcellio eserensis* to *Porcellio zarcoi* VANDEL, 1960 from the Madeira Islands.

KEY WORDS: Oniscidea, *Porcellio*, Taxonomy, Canary Islands.

RESUMO: *PORCELLIO ESERENSIS* N. SP. (ISOPODA: ONISCIDEA: PORCELLIONIDAE) DAS ILHAS CANÁRIAS. É descrita uma nova espécie de isopoda terrestre da ilha de Hierro (Canárias). Os autores referem a existência de relações entre *P. eserensis* e as espécies madeirenses deste grupo.

PALAVRAS CHAVE: Oniscidea, *Porcellio*, Taxonomia, Ilha Canárias.

INTRODUCTION

Fauna studies in insular environments are extremely interesting because islands provide an evolutionary setting where species have adapted themselves to a particular habitat and have diversified from the original populations.

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Excellent examples may be found by studying the terrestrial isopod fauna in the Canary and Madeira islands. In these Archipelagos the endemic species are numerous (HOESE, 1984, 1985; VANDEL, 1954) and the systematic relationships between species are high. This fact prompted VANDEL (1954, 1960) and ARCAGELI (1958) to suggest that the woodlice of the Canaries and Madeira were vestiges of the lost Atlantida population. This hypothesis has been rejected by many geologists (SCHMINCKE, 1976; ARAÑA y CARRACEDO, 1978) and the similarity between the isopod faunas of these Archipelagos can be explained by considering that common or closely related pioneering species came from Africa and Europe (RODRÍGUEZ, 1990).

In spite of the meagre information published on terrestrial isopods from Madeira and the Canary Islands, it should be pointed out that a great diversification of the Porcellionidae, amounting to about 55% of all species (n=48) known from the Canary Islands and 51% of all (n=47) from Madeira (HOESE, 1978; VANDEL, 1960; see also SCHMALFUSS, 1989).

In the family Porcellionidae, the genus *Porcellio* shows the greatest diversification giving rise to numerous closely related species in both archipelagos. *Porcellio eserensis* sp. n. is yet another endemic species of the Porcellionidae in the Canary Islands and it has been found as a result of sampling between 1987-90.

Porcellio eserensis sp. n.

Holotype: 1 male, 4.6 mm. Caldereta del Tabaibal Manso (Isla del Hierro), 30/03/89. R. Rodríguez leg.

Paratypes: 3 males, 12 females (5 ovigerous). Caldereta del Tabaibal Manso (Isla del Hierro). R. Rodríguez leg.

Nominal Derivation: Derived from the word "esere" used in the primitive Canarian language.

SOMATIC CHARACTERISTICS

Maximum length of the male 4.7 mm; 6.9 mm in the female (ovigerous female).

Eyes made up of 20 ommatides. colour brown with a sagittal and bright stripes. Parasagittal zones spattered with bright spots.

Frontal line of the cephalon with two rounded lateral lobes and facing downwards. Middle lobe larger with anterior edge facing upwards (Fig.1).

Posterior borders of the pereaeon segments I-III sinuouses (Fig.2). Posterolateral angle of the pereaeon segments IV-VII form a tip oriented backwards.

Telson short and triangular with slightly curved sides.

TEGUMENTARY CHARACTERISTIC

Many fine tricorn-like setae on the back.

Back with granulations forming four or five rows on the vertex and first pereiopod. Two rows on the pereiopod II-VII. These granulations become smaller towards the last ones. There is a row of tubercles on the posterior edge of each tergite, including all pleonites. Two pairs of tubercles on the telson.

There are two semielliptic and lodged glandular areas at the margin on each epimera. They are located in the middle of the epimeral margin, except the first ones located on the anterior angles.

Glandular areas with 4-7 pores.

Noduli laterales are large and located near the side margin of the epimeron (Fig.11).

APPENDICES

Short and robust antennae which exceed the posterior edge of the first pereiopod (Fig.3). The first segment of the flagellum is half as long as the second one. Both segments are covered with abundant setae.

Protopodite of uropods with oblique posterior margin, reaching the apex of the telson. The exopodites are short (Fig.4). The endopodites exceed the apex of the telson.

MALE SEXUAL CHARACTERISTICS

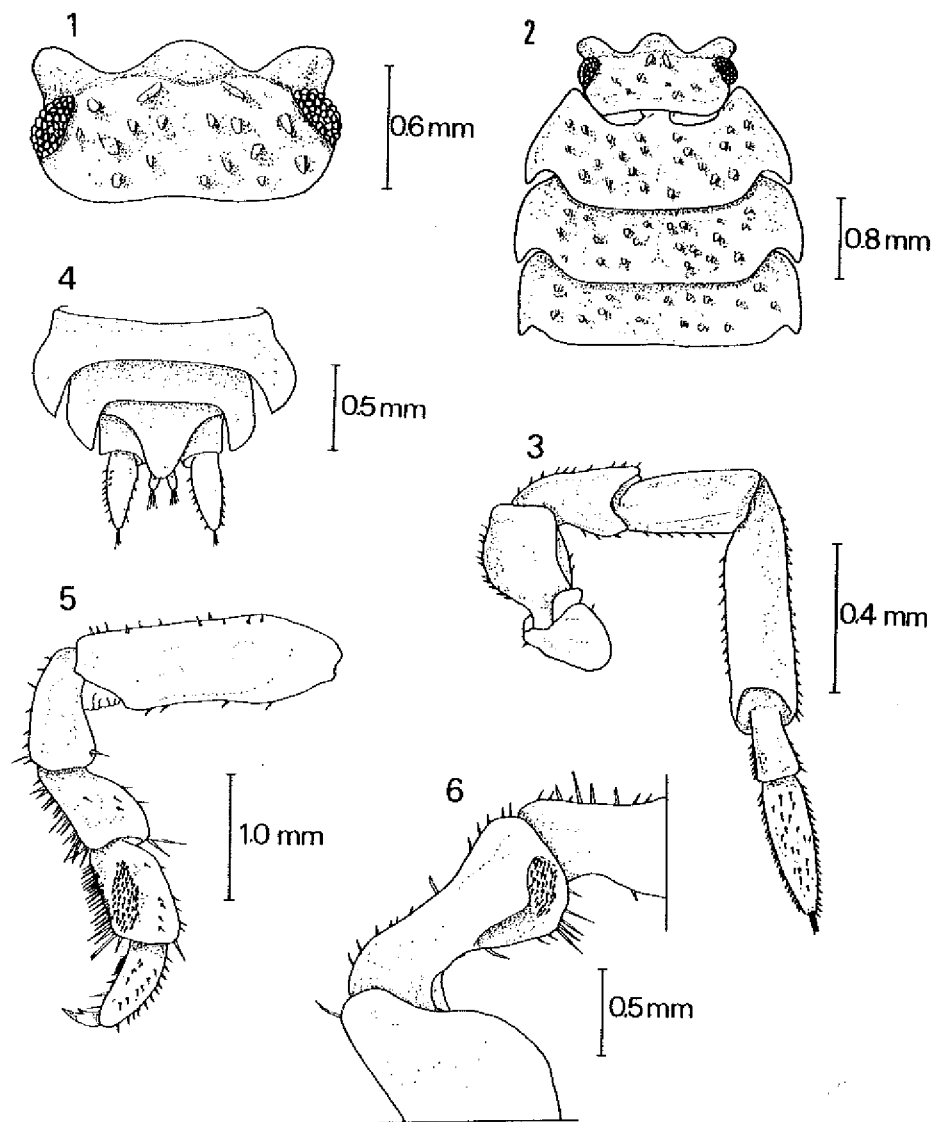
First pereiopods have a bunch of spines on carpopodite and meropodite (Fig.5). In the female these spines are not as numerous, but are equally long.

The seventh pereiopod has a dorsal curved edge, with a pit full of setae on the anterior surface of the ischiopodite (Fig.6).

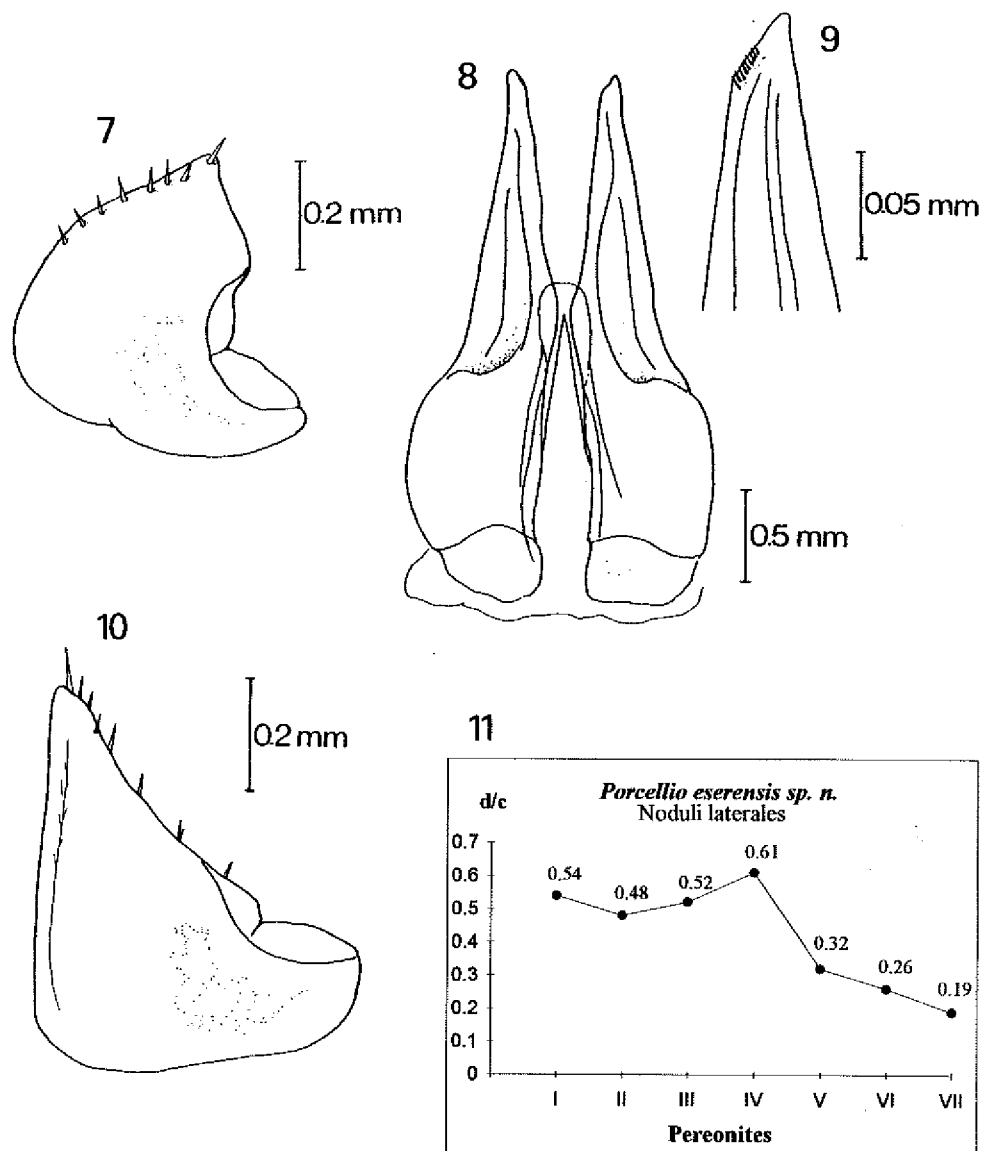
The exopod of the first pleopod has a tracheal area in a posterior position. It has a deeply hollow edge. The posterior lobe has a well defined apex (Fig.7).

The endopodite of the first pleopod has a row of spines on the inner edge near the apex (Fig 8 and 9).

The exopod of the second pleopod is quadrangular (Fig.10)



Figs. 1 - 6 -- *Porcellio eserensis* n. sp. . 1: dorsal view of the cephalon; 2: Dorsal view of cephalon and pereonites I-III; 3: antennae; 4: telson and uropods; 5: first pereopod of the male; 6: Ischiopodite of the seventh pereopod of the male.



Figs. 7 - 11 — *Porcellio eserensis* n. sp.. 7: Exopod of the first pleopod of the male; 8: endopod of the first pleopod of the male; 9: Detail of the tip; 10: Exopod of the second pleopod of the male; 11: *noduli laterales*.

HABITAT

All samples recorded come from a locality with *Euphorbia obtusifolia* Poirot, 200 m. above sea level on sandy substrate. Up to the present, they have only been found in the Hierro Island. Possibly *P. eserensis* sp. n. is an endemic species of this Island.

DISCUSSION

We have included *Porcellio eserensis* sp. n. in the *scaber* group taking into account the fact that it shows granulations over tergites, glandular areas lodged at the margin, and the lateral position of the pseudotrachea of the exopod 1 of the male.

We have found the relationships of *Porcellio eserensis* among species belonging to the *scaber* group in the Madeira Archipelago. The small size, the shape of the frontal lobes, telson and the shape of the exopod of the first pleopod of the male relate *Porcellio eserensis* to *Porcellio zarcoi* VANDEL, 1960 from the Madeira Islands although they differ in tegumentary characteristics, unadorned in *P. zarcoi* and granular in *Porcellio eserensis* sp. n.

REMARKS

This species can be identified by the small size, the granular tergites, the low number of glandular pores and the shape of the exopodite of the first male pleopod.

BIBLIOGRAPHY

ARAÑA, V. y CARRACEDO, J.

1978. Los volcanes de las Islas Canarias. I. Tenerife. Ed. Rueda, 151 pp. Madrid. España.

ARCANGELI, A.

1958. La fauna Isopodologica terrestre degli Arcipelaghi di Madera e delle Canarie: la sua importanza per la sistematica e la biogeografia. *Mem. Est. Mus. Zool. Univ. Coimbra*, 225: 1-109.

HOESE, B.

1978. Über eine Isopodensammlung von Madeira und eine neue *Porcellio* Art: *Porcellio gruneri* n. sp. (Isopoda: Oniscoidea). *Bocagiana* 44: 1-7. Funchal.

1984. Ein Beitrag zur Tiergeographie der Terrestrischen Isopoden der Kanarischen Inseln (Crustacea: Isopoda: Oniscoidea). *Cour t.Forsch.-Inst.Senckenberg*, 71:39-44.

1985. Three new species of *Porcellio* (Isopoda: Oniscoidea) from the Western Canary Islands. *Stuttgarter Beitr. Naturk.*, ser. A, 12 S (381): 1-12.

RODRIGUEZ, R.

1990. Algunas consideraciones del género *Soteriscus* Vandel, 1956 en las Islas Canarias con la descripción de una nueva especie: *Soteriscus dissimilis* n. sp. (Crustacea: Isopoda: Oniscidea). *Bol. Asoc. esp. Entom.*, **14**: 115-126.

SCHMALFUSS, H.

1989. Phylogenetics in Oniscidea. *Monitore zoologico Italiano*, n.s., Monogr. **4**: 3-27.

SCHMINCKE, H.U.

1976. The geology of the Canary Island. In Kunkel, G. (ed.): Biogeography and Ecology in the Canary Island, 67-124. Dr. W. Junk b.v., Publishers, The Hague, 1976.

VANDEL, A.

1954. Etude des Isopodes Terrestres recueillies aux les Canaries par J. Mateu en Mars-Avril 1952. *Mem. Mus. Nat. Hist. Nat.*, Ser. A, Zool. T. VIII, fasc. 1, pp. 1-60.
1960. Les Isopodes Terrestres de l'Archipel Madérien. *Mem. Mus. Nat. Hist. Nat.*, Ser. A. Zool. T. XXII, fasc. 1: 1-156.

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NOTES ON TWO MADEIRA PLANTS

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The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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